

REMARKS

The Office Action dated April 9, 2009 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1, 4, 7, 19, 21-23, 25-26, 34, 37-39, and 41-45 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claims 46-47 are newly added. No new matter has been added and no new issues are raised which require further consideration or search.

Claims 1, 3-19, 21-26, 34 and 37-47 are presently pending.

OBJECTIONS TO THE DRAWINGS:

The drawings were objected to under 37 CFR 1.83(a) as allegedly not showing every feature of the invention specified in the claims, in particular, a “processor,” as recited in claims 19, 21, and 25. Applicants traverse this objection as legally improper.

37 CFR 1.81 states, “The applicant for a patent is required to furnish a drawing of his invention where necessary for the understanding of the subject matter sought to be patented” (emphasis added). 37 CFR 1.83(a) further modifies 37 CFR 1.81 by adding, “The drawing in a nonprovisional application must show every feature of the invention specified in the claims.” In other words, only in the case where a drawing is necessary

for the understanding of the subject matter sought to be patented, and the drawing has been provided, does an Applicant need to show every claimed feature for the depicted embodiment.

In the present case, although Figures 1-5 have been provided for the Examiner's convenience, new drawings are not necessary, since the drawings clearly illustrate the subject matter sought to be patented. For example, Figure 1 shows proxy call session control function (P-CSCF's) 35 and 37, interrogating call session control function (I-CSCF's) 38 and 39, and a serving call session control function (S-CSCF) 36. One of ordinary skill in the art would recognize that the P-CSCF's, the I-CSCF's, and the S-CSCF are typically equipped with a "processor," or as amended in the claims "a controller." Thus, Figure 1 illustrates the "processor" or "controller" of the claimed invention. Accordingly, Applicants respectfully submit that this objection is clearly improper and, therefore, be withdrawn.

REJECTION UNDER 35 U.S.C. § 112:

Claims 19, 21, and 25 were rejected under 35 USC 112, first paragraph, because the limitation a "processor" is allegedly not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors had possession of the claimed invention.

In response, the claims have been amended to more particularly point out and distinctly claim the invention.

Accordingly, it is respectfully requested that the § 112, second paragraph rejections to the claims be withdrawn.

CLAIM REJECTIONS UNDER 35 U.S.C. § 102

Claims 25, 26, 37, 38, 43, and 45 were rejected under 35 U.S.C. §102(b) as being anticipated by Phan-Anh (WO 02/091785). The Office Action took the position that Phan-Anh discloses all of the elements of the claims. This rejection is respectfully traversed for at least the following reasons.

Claim 25, upon which claim 37 is dependent, recites an apparatus that includes a controller configured to perform various operations. The operations include to determine that a first network element in a communications network is out of service by sending a request to the first network element from the apparatus and determining that no response has been received from the first network element at the apparatus. Other operations include, when the first network element is determined to be out of service, drop a bearer configured to signal between the apparatus and a communications network comprising the first network element. Further operations include to discover or select at the apparatus a second network element, and to send from the apparatus to the second network element a message comprising an initial request for registration at the communications network.

Claim 26, upon which claim 38 is dependent, recites a method, including sending from user equipment a first message to a first network element, detecting at the user

equipment that the first network element is out of service, and dropping a signalling bearer from the user equipment to a communications network comprising the user equipment and the first network element. The method also includes selecting or discovering at the user equipment a second network element in the communications network, and sending from the user equipment to the second network element a message comprising an initial registration request.

Claim 43 recites an apparatus, including determining means for determining that a first network element in a communications network is out of service by sending a request from the apparatus to the first network element and determining that no response has been received from the first network element at the apparatus. The apparatus also includes when the first network element is determined to be out of service, dropping means for dropping a bearer for signaling between the apparatus and a communications network comprising the first network element. The apparatus includes discovering means for discovering or selecting at the apparatus a second network element, and sending means for sending from the apparatus to the second network element a message comprising an initial request for registration at the communications network.

Claim 45 recites a computer readable medium configured to store instructions of a computer program that when executed controls a controller to perform sending from user equipment a first message to a first network element, detecting at the user equipment that the first network element is out of service, and dropping a signalling bearer from the user equipment to a communications network comprising the user equipment and the first

network element. The computer readable medium is also configured to store instructions of a computer program that when executed controls the controller to perform selecting or discovering at the user equipment a second network element in the communications network, and sending from the user equipment to the second network element a message comprising an initial registration request.

As will be discussed below, the disclosure of Phan-Anh fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the features discussed above.

Phan-Anh describes a method for a communication system in which a user can be provided with at least one registration at a first control entity. The one registration is transferred to a second control entity in response to another registration of the user to the second control entity. In operation, the user equipment 1 will request a registration 1 by sending a SIP REGISTER message to a proxy server entity 30. The request is forwarded to an interrogating server 31 and a subscriber database HSS 24. The interrogating server will audit the first and second control entities for the user information and will determine where the user IDs are registered. The interrogating server 31 will then request that the user be registered with the second control entity 23 and acknowledgements are also exchanged to confirm the registration process (see page 11, lines 10-30 of Phan-Anh).

In particular Phan-Anh discloses a network element (I-CSCF) which on being made aware that a S-CSCF is out of service, selects a new S-CSCF for registration of the user.

It is respectfully submitted that the Office Action has overlooked some important features of the claims. In particular, Phan-Anh fails to disclose that the user equipment is involved in the reselection or discovery of a second network element (e.g. the second S-CSCF, 23). In contrast, independent claim 26 recites, in part, “detecting at the user equipment that the first network element is out of order”. The Office Action refers to page 4, lines 25 to 30, page 14, lines 16 to 28, of Phan-Anh as describing such recitation of independent claim 26. However, Applicants respectfully submit that the description of Phan-Anh is limited to providing that “another S-CSCF must be assigned e.g. by an I-CSCF” (page 4, line 28) and “the I-CSCF is forced to select a new controller entity S-CSCF2” (page 14, line 24 to 25). It is clear that the I-CSCF detects that the network element (e.g., the S-CSCF 23) is out of order, not the user equipment as recited in independent claim 26.

Furthermore, independent claim 26 recites, in part, “selecting or discovering at the user equipment...”. To reject this feature of independent claim 26, the Office Action referred to page 4, line 29 and page 14, line 24 to 25, of Phan-Ahn. However, it is respectfully submitted that, in the referred portions, Phan-Anh merely describes that the I-CSCF selects the new S-CSCF. As mentioned above, the I-CSCF is not the user equipment.

In addition, independent claim 26 recites, in part, “sending from the user equipment to the second network element a message comprising an initial registration request”. To reject this feature of independent claim 26, the Office Action referred to

page 6, lines 21 to 23, of Phan-Anh. However, this portion of Phan-Anh describes that “said other registration may comprise as new registration of an identifier of the user or a re-registration of an identifier of the user”. It is respectfully submitted that the “other registration” which this portion of Phan-Anh refers to is the “another registration of the user to said second control entity” as disclose at the top of the same page (page 6, lines 6 to 7). In contrast and as previously mentioned, the selection of the second controller entity (S-CSCF2, 23) is selected by the I-CSCF – i.e. a network element and not user equipment as recited in independent claim 26.

Therefore, Applicants submit that Phan-Anh fails to teach all of the subject matter of independent claims 25, 26, 43, and 45 and related dependent claims. Withdrawal of the rejection of the claims is kindly requested.

CLAIM REJECTIONS UNDER 35 U.S.C. § 103

Claims 1, 3-15, 17, 19, 21-24, 34, 39-42, and 44 were rejected under 35 U.S.C. §103(a) as being unpatentable over Phan-Anh (WO 02/091785) in view of 3GPP (3rd Generation Partnership Project; Technical Specification Group Service and System Aspects; Telecommunications Management; Charging Management; Charging data description for the IP Multimedia Subsystem (Release 5) 3GPP TS 32.225 v2.0.0 (2002-09)). The Office Action took the position that Phan-Anh discloses all of the elements of the claims, with the exception of determining at the first network element a type of the first message, in dependence on the type of the first message, sending from the first

network element to the user equipment an error message including an indication that the serving network element is out of service. The Office Action then cited 3GPP as allegedly curing this deficiency in Phan-Anh. This rejection is respectfully traversed for at least the following reasons.

Claim 1, upon which claims 3-18 are dependent, recites a method that includes receiving at a first network element in a communications network a first message from a user equipment, and transmitting the first message from the first network element to a serving network element. The method also includes detecting at the first network element that the serving network element is out of service, determining at the first network element a type of the first message, and in dependence on the type of the first message, sending from the first network element to the user equipment an error message including an indication that the serving network element is out of service. The method further includes subsequent to sending the error message to the user equipment, receiving a second message from the user equipment of a second type different from the first message type.

Claim 19, upon which claim 46 is dependent, recites an apparatus that includes a controller configured to receive a first message from a user equipment, forward the first message to a serving network element, and detect that the serving network element is out of service. The controller is also configured to determine a type of the first message, in dependence on the type of the first message received from the user equipment send an error message to the user equipment, and subsequent to the error message being sent to

the user equipment, receive a second message from the user equipment of a second type different from the first message type.

Claim 21, upon which claims 22-24 are dependent, recites an apparatus that includes a controller configured to receive an error message from a first network element in a communications network in response to a first message, the error message indicating that a serving network element for the apparatus is out of service. The controller is also configured to in response to the error message to send a further message of a second type different from the type of the first message to the first network element.

Claim 34 recites a system that includes a network element, and a serving network element in communication with the network element. The system also includes user equipment in communication with the network element. The network element is configured to receive a first message from the user equipment, forward the first message to the serving network element, and detect that the serving network element is out of service. The network element is also configured to determine a type of the first message, and in dependence on the type of the first message received from the user equipment, send an error message to the user equipment. The network element is also configured to subsequent to sending the error message to the user equipment, receive a second message from the user equipment of a second type different from the first message type from the user equipment.

Claim 39, upon which claim 40 is dependent, recites a method including receiving an error message from a first network element in a communications network in response

to a first message, the error message indication that a serving network element for a user equipment is out of service. The method includes, in response to the error message, sending a further message of a second type different from the type of the first message to the first network element.

Claim 41 recites an apparatus including first message receiving means for receiving a first message from a user equipment, forwarding means for forwarding the first message to a serving network element, and detecting means for detecting that the serving network element is out of service. The apparatus also includes determining means for determining a type of the first message, and sending means for sending an error message to the user equipment in dependence on the type of the first message received from the user equipment. The apparatus includes subsequent to sending the error message to the user equipment, second message receiving means for receiving a further message of a second type different from the first message type from the user equipment.

Claim 44 recites a computer readable medium configured to store instructions of a computer program that when executed controls a controller to perform receiving at a first network element in a communications network a first message from a user equipment, transmitting the first message from the first network element to a serving network element, and detecting at the first network element that the serving network element is out of service. The computer readable medium is also configured to store instructions of a computer program that when executed controls the controller to perform determining at

the first network element a type of the first message, in dependence on the type of the first message, sending from the first network element to the user equipment an error message including an indication that the serving network element is out of service, and subsequent to sending the error message to the user equipment, receiving a second message from the user equipment of a second type different from the first message type.

Claim 47 recites a computer readable medium configured to store instructions of a computer program that when executed controls a controller to perform receiving an error message from a first network element in a communications network in response to a first message, the error message indication that a serving network element for a user equipment is out of service, and in response to the error message, sending a further message of a second type different from the type of the first message to the first network element.

Applicants submit that the combination of Phan-Anh and 3GPP, taken individually or in combination, fail to disclose or suggest all the features of independent claims 1, 19, 21, 34, 39, 41, 42, and 44.

As mentioned above, Phan-Anh discloses a method for a communication system in which a user can be provided with at least one registration at a first control entity. Phan-Anh is not concerned with sending information to the user equipment on determination that a serving network entity is out of order. Instead, Phan-Anh discloses that the I-CSCF selects a new S-CSCF (e.g., see page 4, line 28 and page 14, line 24 to 25, of Phan-Anh).

Specifically, Phan-Anh fails to teach the order of the features of “detecting at the first network element that the serving network element is out of service” after the feature of “transmitting the first message from the first network element to a serving network element”, as recited in independent claim 1 and similarly recited in independent claims 19, 21, 34, 39, 41, 42, and 44. The Office Action referred to page 11, line 26 to 27, and Figure 3 of Phan-Anh to reject the patentability of these claimed features. However, the referred portion of Phan-Anh describes that the SIP REGISTER message is sent from the I-CSCF 31 to the S-CSCF#2 23. It is clear from Figure 3 and the passage at page 11, lines 1 to 24, of Phan-Anh that the determining that the serving network element is out of service occurs “in response to the Cx query”. In this way any determination carried out by the I-CSCF that a S-CSCF is temporarily out of service occurs before the SIP REGISTER message is sent to the any serving entity.

In fact, the I-CSCF only sends the SIP REGISTER message to the second controller entity 23 –a second controller entity which is available. The I-CSCF does not send a message to a S-CSCF only to find out that the S-CSCF is out of service. The I-CSCF instead receives information as a response to the Cx query (page 11, line 5) and then sends the SIP REGISTER message on the basis of the Cx query response. This is clearly seen from Figure 3, step 6 occurring after step to the before for transmitting the first message to the S-CSCF 23.

Furthermore, the Office Action asserts that Phan-Anh describes “receiving at a first network element in a communications network a first message from a user

equipment,” as recited in independent claim 1 and similarly recited in independent claims 19, 21, 34, 39, 41, 42, and 44. The Office Action referred to page 6, lines 21 to 23, and page 10, lines 10 to 14, of Phan-Anh as disclosing such feature. However, it is respectfully submitted that the referred portions of Phan-Anh fail to disclose or suggest the receiving feature and, in fact, the processes referred to are actually carried out by the I-CSCF which is a network element and not a user equipment as in the present claims.

Furthermore, referring to Figure 3 of Phan-Anh, there is absolutely no teaching or suggestion of a second message being sent from the user equipment or even that a second message is different from the first message. *Figure 3 and the referred portions of Phan-Anh only show one message sent from the user equipment which is the SIP REGISTER message* (emphasis added).

As identified by the Office Action, Phan-Anh fails to teach or suggest the features of:

- determining at a first network element the type of the first message; and
- in dependence on the type of the first message, sending from the first network element to the user equipment an error message including an indication that the serving network element is out of service.

The Office Action suggests that Phan-Anh could be combined with the description of 3GPP to provide a combination of features as required by the independent claims. However, the description of Phan-Anh would be frustrated by modifying the arrangement to incorporate the features of 3GPP. Therefore, there is no motivation for a person skilled in the art to combine Phan-Anh and 3GPP.

A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984); *see also* MPEP § 2141.02 – Differences Between Prior Art and Claimed Invention. In this instance, Phan-Anh actually teaches away from sending an error message to the user equipment because Phan-Anh explicitly describes that if a temporary failure occurs the I-CSCF is forced to select a new controller entity S-CSCF 2 (see page 14, lines 22 to 25). That is, the I-CSCF selects a new serving network element and therefore there is no reason for the user equipment to receive an error message, because from the point of view of the user equipment no error message is necessary, if the I-CSCF selects a new controller entity. Therefore, a person of ordinary skill in the art would not be motivated to combine the description of Phan-Anh with the description of 3GPP.

Figure 5.6 of 3GPP describes that a P-CSCF forwards an SIP SUBSCRIBE request to the SCSCF. In the case of a failure, an appropriate SIP error message is returned to the P-CSCF. 3GPP does not teach or suggest detecting that the serving network element is out of service as recited in independent claim 1 and similarly recited in independent claims 19, 21, 34, 39, 41, 42, and 44. At least one reason why 3GPP does not teach or suggest such feature is because the P-CSCF actually receives an SIP response. It is clear that the S-CSCF of 3GPP has to be functional because otherwise a

SIP error message could not be sent. Therefore, Figure 5.6 of 3GPP does not even contemplate the scenario whereby the S-CSCF is out of service.

Furthermore, step 2 of Figure 5.6 only indicates that the P-CSCF receives the SIP request or error message. 3GPP is silent on sending error message to the user equipment.

3GPP does not disclose determining the type of the first message and then in dependence on the type of the first message, send an error message to the user equipment. There is no teaching or suggestion at page 18, section 2 that the type of the first message from the user equipment (e.g. SIP SUBSCRIBE request) has any bearing on whether an error message is sent to the user equipment.

Furthermore, there is absolutely no disclosure in 3GPP of the feature of sending a second message of a second type different from the type of the first message from the user equipment in response to receiving an error message that the user equipment (assuming that the SIP response is an SIP error message – which is not admitted). 3GPP does not teach or suggest whether further messages are sent from the user equipment or whether the further messages are a different type from the first message.

None of cited prior art references, individually or combined, teach or suggest that the user equipment sends a second message of a type different from the first message. Therefore, for the reasons above at least, none of the cited prior art references provide all the features of the independent claims.

In contrast, some embodiments of the present invention may receive at the first network element a second message from the user equipment of a second type different

from the type of the first message subsequent to sending the error message to the user equipment. This means some embodiments of the present invention may identify the error and the location of the out of service server and may provide processes for selecting another serving call state control function. For example, some embodiments of the present invention may advantageously provide a user equipment which attempts to re-register with an existing call session control function but on receipt of an error message sends an initial registration message to a different call session control function. This means that users do not experience service discontinuity and can change their communication requirements. Furthermore, users do not need to restart their user equipment in order to re-establish connection (e.g., see page 4, lines 5 to 26 of the present application).

Therefore, Applicants submit that Phan-Anh and 3GPP, individually or combined, fail to disclose all of the subject matter of independent claims 1, 19, 21, 34, 39, 41, 42, 44 and 47. By virtue of dependency, Phan-Anh and 3GPP also fail to disclose the subject matter of those claims dependent thereon. Withdrawal of the rejection of the claims is kindly requested.

Claims 16 and 18 were rejected under 35 USC 103(a) as allegedly being unpatentable over Phan-Anh in view of 3GPP, and further in view of U.S. Patent Appln. Pub. No. 2004/0225878 of Costa-Requena et al. ("Costa-Requena"). We note that Costa-

Requena is a Nokia patent application. Applicants respectfully traverse this rejection as legally improper.

Costa-Requena cannot be cited against the present application to show obviousness. Costa-Requena was published on November 11, 2004, which is after the priority date of the present application. The present application claims properly perfected priority to British Patent Appln. No. 0324597.4, filed October 21, 2003. Since the present application antedates Costa-Requena's publication, the only possible section of 35 U.S.C. 102 under which Costa-Requena could be applicable as prior art for obviousness is 35 U.S.C. 102(e). However, 35 U.S.C. 103(c) prohibits the USPTO from citing (for the purposes of establishing obviousness) a reference that is only available as prior art via 35 U.S.C. 102(e), and which was under a mutual obligation of assignment to the same entity at the time the invention was made. Costa-Requena was either already assigned to or under an obligation of assignment to Nokia Corporation at the time the invention was made, as evidenced by the assignment recorded at Reel 014280, Frame 0715, on July 18, 2003. The assignment of the present application to Nokia Corporation was recorded at Reel 018604, Frame 0644, on November 9, 2006.

Thus, as demonstrated above, Costa-Requena cannot be used to show obviousness of the claims of the present application. Accordingly, Applicants respectfully submit that the rejection of claims 16 and 18 is clearly improper, and requesting that this rejection be withdrawn.

CONCLUSION:

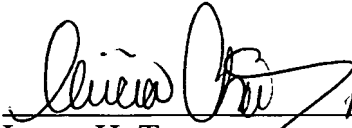
In view of the above, Applicants respectfully submit that the claimed invention recites subject matter which is neither disclosed nor suggested in the cited prior art. Applicants further submit that the subject matter is more than sufficient to render the claimed invention unobvious to a person of skill in the art. Applicants therefore respectfully request that each of claims 1, 3-19, 21-26, 34, and 37-47 be found allowable and this application pass to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time.

Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,


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Enclosures: Additional Claim Fee Transmittal
Check No. 21069